# The start of the meteorological spring

## Description

For statistical and historical reporting purposes, in meteorology, spring begins on the 1 March and ends on the 31 May. For many people though, spring begins on the date of the spring equinox, 20 March.

Although spring can be determined by calendar dates, the natural variability within the atmosphere means that, as far as the weather is concerned, year to year differences vary widely. Last spring was sunnier and warmer than average, while spring 2011 was exceptionally warm and dry. It's too soon to tell what weather we will see this spring, but you can see the outlook for the next 30 days on our website.

Today is also St David's Day, see our events pages for the latest weather in your area.

**Date Created**
March 2013

# Met Office European lead for NASA International Space Apps Challenge

## Description

Next month, the Met Office will be the European lead event for the second International Space Apps Challenge.

In collaboration with governments and organisations around the world, the International Space Apps Challenge on the 20th and 21st April will bring together people on every continent to create open solutions with space data.

In the UK, events are being held at York University, Strathclyde University, Leicester University, London (Google Campus) and the Met Office, Exeter.

An initiative of the Open Government Partnership, the International Space Apps Challenge will showcase the impact that people working together around the world can have on addressing challenges, both on earth and in space, by using open government data resulting from space technology.

Events are planned in cities around the globe and encompass far more than just the development of mobile apps. The event will focus on four challenge areas—software, open hardware, citizen science and data visualisation—providing a platform for open innovation and collaborative problem solving.

Phil Evans, Government Services Director at the Met Office said: ‘We are delighted to be partnering with NASA for a second year and also to be European Lead for the International Space Apps Challenge. Last year was a great success, with one team from the Met Office picking up an international award. We look forward to seeing the challenges participants create this year.”

Teams at the event will also be using our DataPoint web service. This gives access to operational UK weather data and observations as well as exploiting other open data sets available from the Met Office and other participating organisations.

To learn more about the International Space Apps Challenge and to register your interest, visit the Space Apps Challenge homepage. Keep up to date with the latest news on Twitter on @SpaceAppsLondon and @SpaceAppsExeter.

**Date Created**
March 2013

# Fascination and forecasting – guest blog by Siân Lloyd

## Description

Siân Lloyd

Here in the UK we're famous for being obsessed with the weather, and I'm no exception to that. My fascination with the weather started from a young age because my father had a passion for the outdoors, so we were always out in all weathers.

Coming from Wales, where we get continually walloped by fronts spinning off the Atlantic, you certainly see a great variety of weather and you soon get used to coping with whatever gets thrown at you. I remember eating egg and marmite sandwiches on Gower beaches, sat in a kagool with my father saying the rain would clear soon – he was always an optimist.

It's not just my own experiences that captured my fascination, but also the myths and legends of the Celtic landscape I grew up in. Virtually every story has weather in it – from violent storms, to great floods, or the tranquil calm of a summer's day. So for me, weather represents the drama of life and is the very stuff of our literature.

So it doesn't surprise me that, wherever I go, people are always keen to talk about the weather and what's in the forecast. I know I may be biased, but I really do believe that forecasting is hugely important. From protecting people from the harshest conditions our climate has to offer, to helping fashion conscious ladies like myself decide what to wear, forecasts help us in so many aspects of our day to day lives.

In many ways we take forecasting for granted, but to me the ability to predict the weather days ahead is a true feat of human ingenuity and one of the great triumphs of science. In 1922, mathematician Lewis Fry Richardson estimated you'd need 64,000 people doing endless calculations to get a forecast in time to make it useful – looking just a few hours ahead. Today we take observations from all over the world, from the top of the atmosphere to the depths of the oceans, put them in a supercomputer that does trillions of calculations a second to make forecasts, then people like me interpret that output to put together tailored forecasts which can be transmitted around the world in seconds. Truly amazing

stuff.

I've been in weather forecasting for 20 years and things have changed a lot. One of the biggest changes is the huge strides in accuracy that have been made. Even from my personal experience I can tell how much better forecasts are and the statistics bear that out. The Met Office's four-day forecasts are as accurate as its one day forecasts were 30 years ago, and things are still improving all the time as we understand more about the way the atmosphere works and technology improves.

The other big thing that I've noticed is that the weather used to follow the news, but now it very often is the news. So often these days I get asked to speak on air during bulletins about floods or droughts and why we're seeing them. So, from my personal experience, it seems like the weather is changing and that our warming climate is playing a part. As we go forward then, science once again will have an important role to play in helping us understand how and why things are changing, and ever more accurate forecasting will help keep everyone prepared for whatever the weather has in store.

If you want to learn more about our weather and climate, as well as how it all works, you can read about it in 'An Essential Guide to the Weather' – a two part guide which will be free in The Telegraph this weekend on the 9th and 10th of March. Part 1, in Saturday's paper, explains the causes of our weather and provides a comprehensive guide to clouds and other types of weather. Part 2 looks at how weather forecasting is done, extreme weather, and climate zones around the world.

**Date Created**
March 2013

# Win one of two £50 Kitbag.com vouchers each week during the 6 Nations

## Description

Each week during the RBS 6 Nations, we've joined forces with Kitbag to give away two £50 vouchers. Enter the competition on our Facebook page for a chance to win one of the two prizes up for grabs each week.

Stockists of the RBS 6 Nations official supporters range for all six nations, Kitbag.com are offering free standard delivery on all orders over £40 to readers of the Met Office blog. The saving will be added to your order automatically.

Attending a match? Find the weather for every 6 Nations game on our dedicated events page.

**Date Created**
March 2013

# Spring swing brings colder weather and snow

## Description

We've had some very mild conditions this week with welcome sunshine pushing temperatures into the high teens. However, in a classic spring swing, colder weather is on the way as we head into the weekend.

By Saturday, we will see a return of easterly winds which will bring in much colder air from Scandinavia and Eastern Europe. Snow is expected across some eastern parts of the country over the weekend. By the start of next week, most of the UK will see daytime highs in low single figures with some frosty and icy nights.

**So how unusual is it to see cold weather and snow in March?**

The UK's weather is very much at the mercy of where our winds come from, and throughout spring we can see sudden swings in the weather conditions. If we look back to last year we had very high temperatures at the end of March as the UK was under the influence of high pressure and light south-easterly winds. This year, this week's south-easterly winds are now giving way to colder easterlies.

**What about snow?**

Statistics show that snow is more likely in March than around Christmas. As we know, heat from the sun increases as we head towards summer and this can lead to some interesting weather in March. With more heat from the sun the ground warms up more quickly and gives very unstable air, which can lead to a greater number of showers. Warmer air also holds more moisture so showers can give heavier rainfall. If this combines with cold air we can potentially see some heavy snowfall. However, easterly winds tend to be dry and so substantial snow fall is not expected over the next week.

As always, the Met Office will be working with different agencies to keep Britain on the move, and to keep people safe and well during periods of cold weather. The latest forecasts and warnings can be found online, through our mobile apps and through TV and radio broadcasts.

**Date Created**
March 2013

# Setting the record straight in the Daily Mail

## Description

In response to our complaint to an article by James Delingpole in the Daily Mail on 10 January 2013 the Daily Mail has now published a response from the Met Office Chairman on its letters page.

> **Met Office mettle**
>
> James Delingpole's views misrepresent the Met Office's reputation for world-class weather and climate forecasting and research (Mail). The UK can be rightly proud that the Met Office is among the world's top two national weather forecasting services.
>
> We're proud that, in independent surveys, more than 90 per cent of the public regard our warnings as useful and more than 80 per cent of the UK public trust our forecasts and warnings. This respect for our professionalism and impartiality has been built over 150 years of forecasting for the nation.
>
> We aim to use our world leading scientific expertise to protect life and property and increase prosperity and wellbeing right across the UK. We provide impartial services ranging from forecasts and warnings to the public, services to transport operators, so we can fly, drive or sail safely, and advice to the energy, retail and health sectors so we can all go about our daily lives safely and efficiently.
>
> Our forecasts on radio, TV, mobile phone apps and newspapers are a source of daily interest as well as essential advice to the public.
>
> Whatever a journalist's views are about climate change – and they have a right to air them – let's not degrade the institutions on which the public rely.
>
> *GREG CLARKE,*
>
> *Met Office chairman, Exeter, Devon.*

Although this does not fully address all the issues we had with the original article we do accept that a published letter recognises our concerns and has taken steps to resolve some of them. The Daily Mail has also offered to append this letter to the original article.

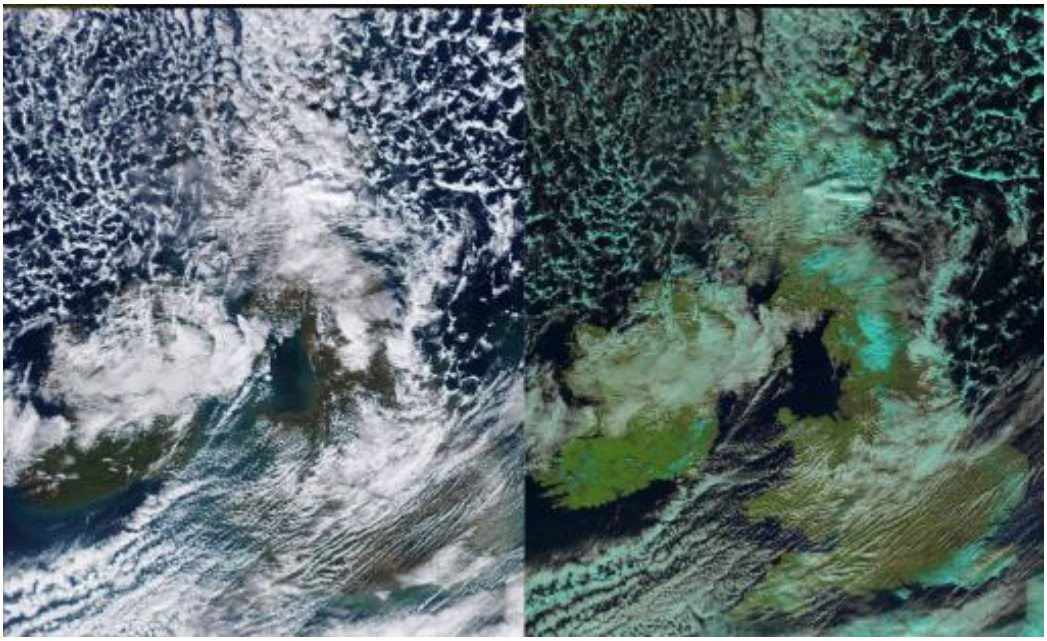
We are grateful to the Daily Mail for dealing with our objections to the inaccuracies in the original article and the efforts made to find a constructive resolution. We are, as ever, grateful for the role the Daily Mail, and other print, online and broadcast media have in bringing key forecasts, warnings, and science to the attention of the public.

**Date Created**
March 2013

# Today’s weather from above

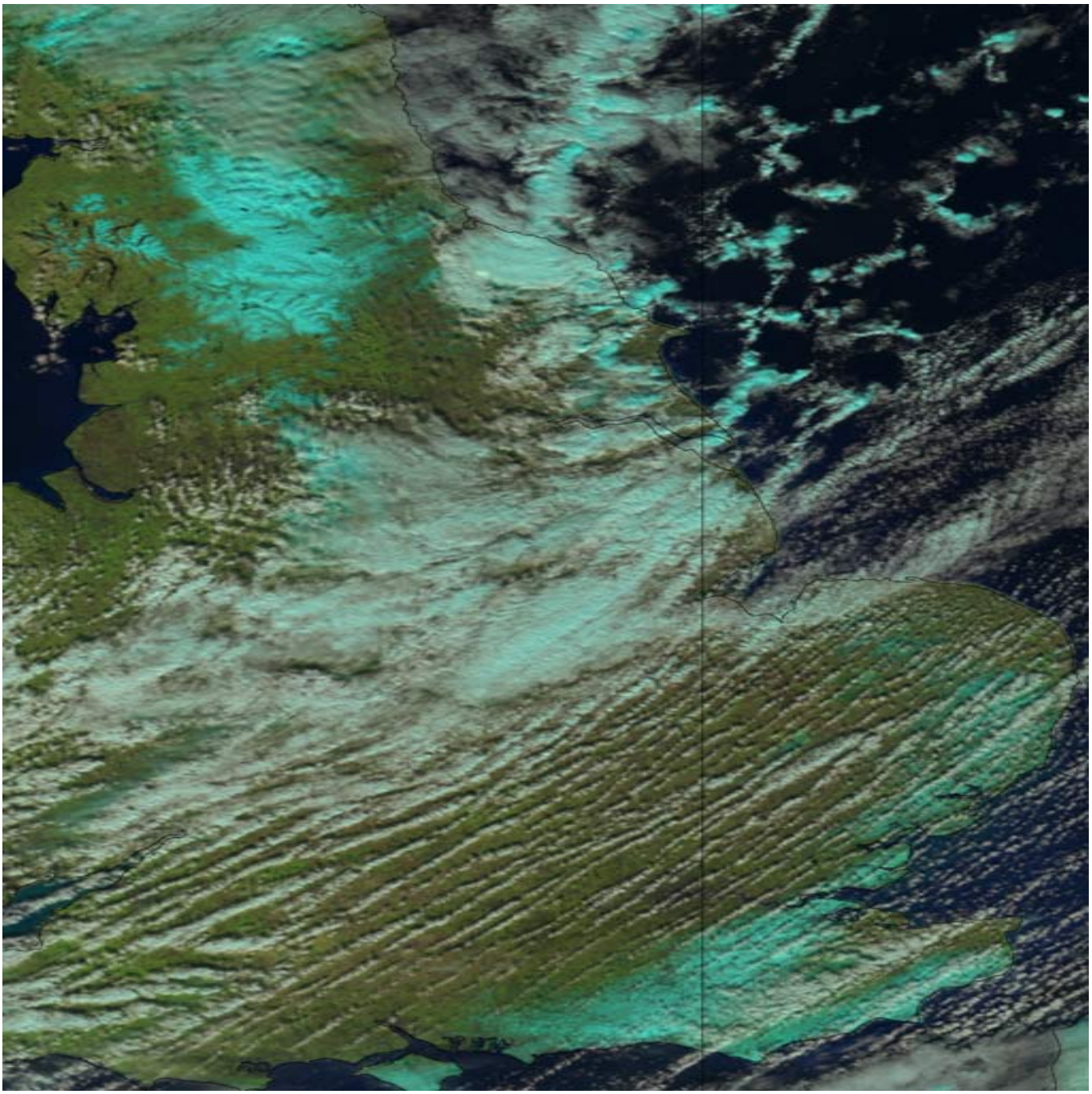
## Description

Today’s satellite images show the small areas of the UK which have snow lying, as well as a number of interesting cloud formations.

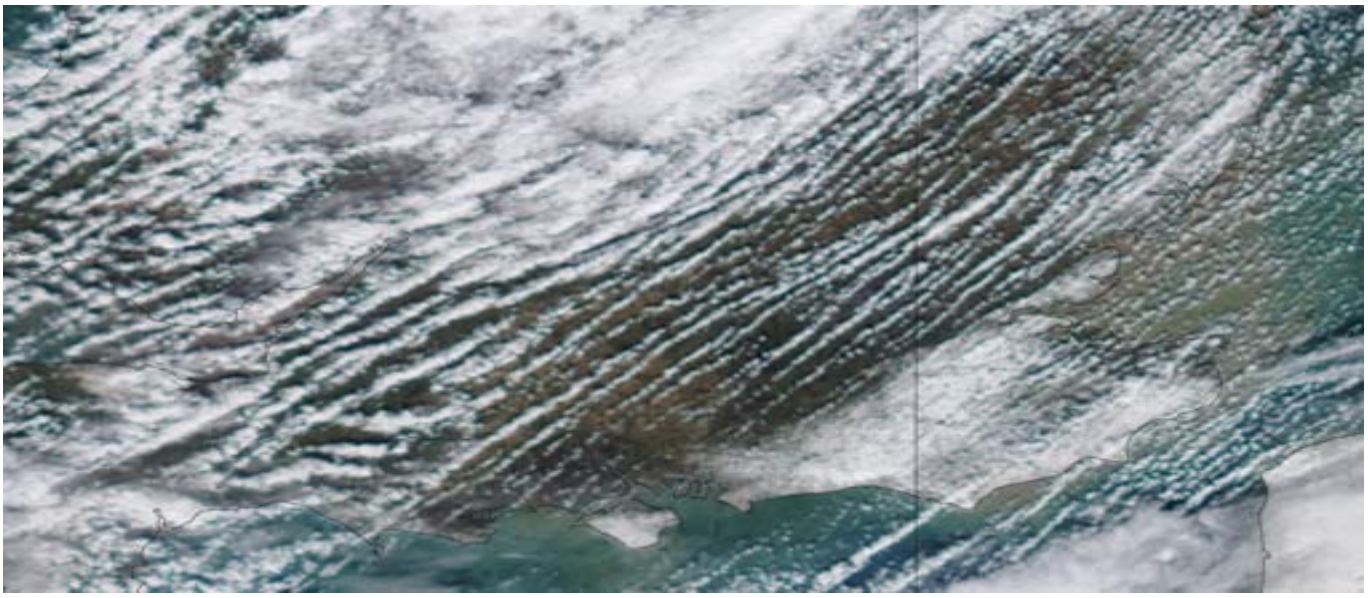


12 March 2013 Left: Visible satellite image of the UK, Right: False colour satellite image of the UK.

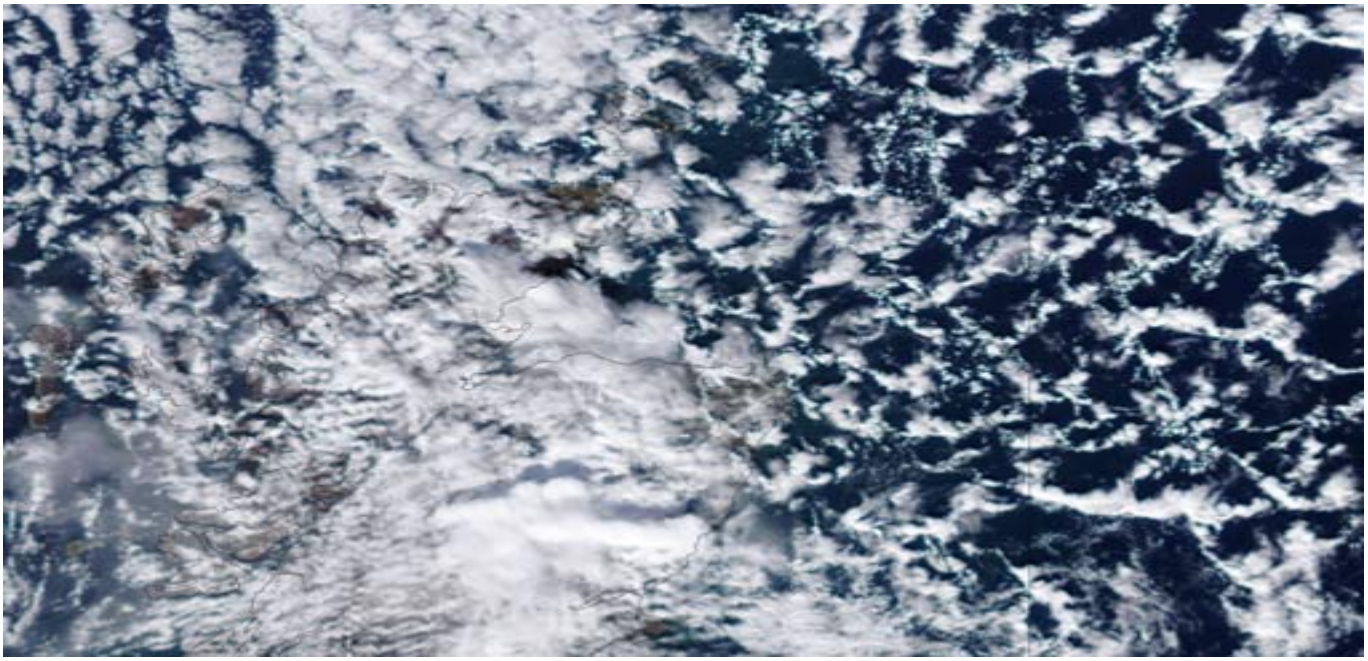
The snow shows up very clearly over the Pennines and Scottish Borders, over the Isle of Wight, southeast England and the far east of East Anglia. False colour images are particularly good for identifying snow because the turquoise colour helps to differentiate between the white of the snow and the white of the clouds.



You can also see how the clouds have lined up on the wind across southern Britain – this is a great example of cumulus clouds forming ‘cloud streets’ when the winds at the height of the clouds are strong.



Over the sea to the north of the UK we can see more shower clouds moving towards us. Here we have a great example of the two different types of convection: open cell – where the individual clouds form circles over the sea; and closed cell – where the individual clouds have ‘clumped’ together across northern Scotland.



Aren’t satellite pictures wonderful.

**Date Created**
March 2013

# Carol Kirkwood picks up fifth TRIC award

## Description

Met Office broadcaster Carol Kirkwood has been named as the UK's best TV weather presenter by the Television and Radio Industries Club for a fifth time.

Carol joined the Met Office weather team at the BBC in 1998 and is best known for her weather presenting during morning television on BBC Breakfast but also works for the BBC News Channel, BBC One and is also a regular contributor and reporter for The One Show.

Carol said: "I am thrilled and delighted to have won this award for the fifth time. I certainly didn't expect to win, being up against such tough opposition. What you see on the television is the sum of many parts, from the chief forecasters at the Met Office, the teams at BBC Weather and BBC Breakfast.  So, I owe a huge debt of gratitude to all those teams."

The Met Office in association with BBC Weather provide more than 120 weather broadcasts a day and more than 1,000 hours of television and radio each year – with forecasts for the whole world.

**Date Created**
March 2013

# Big Bang Fair twitter interviews with Dallas Campbell and Simon Watt

## Description

Ahead of the Big Bang Fair, which starts tomorrow, we held Twitter interviews with science communicators Dallas Campbell and Simon Watt. In case you missed the interviews and their excellent answers, you can see them in full below.

> @metoffice @bigbangfair Most importantly: Do something that excites you. If you're not passionate about it, do something else…
>
> — Dallas Campbell (@dallascampbell) March 4, 2013

> @metoffice The discovery that we 'occupy some privileged position in the universe' is delusional.
>
> — Dallas Campbell (@dallascampbell) March 4, 2013

> .@metoffice The scientists who work ludicrously hard at the coal face and go totally unnoticed by the public. Them. And Sagan for the 'wow'
>
> — Dallas Campbell (@dallascampbell) March 4, 2013

> @metoffice Good Question:1)Understand the principles of story telling.2) Be rigorous.3) Don't be boring.
>
> — Dallas Campbell (@dallascampbell) March 4, 2013

> @metoffice I like drama:Twenty below, howling gales, scorching sun, blizzards, hail…As long as I'm dressed appropriately, bring it!
>
> — Dallas Campbell (@dallascampbell) March 4, 2013

> @metoffice Stay curious, work hard, be willing to change your mind regarding the things you think you know.
>
> — Simon Watt (@SimonDWatt) March 11, 2013

> @metoffice Symbiosis within us- that each of our cells has the remnants of a bacterium, in

the form of our mitochondria, inside them.

— Simon Watt (@SimonDWatt) March 11, 2013

@metoffice Too many to count- Charles Darwin, WD Hamilton, John Maynard Smith - Desmond Morris and David Attenborough too

— Simon Watt (@SimonDWatt) March 11, 2013

@metoffice Beg, borrow and steal from the arts.Inspiration is as important as education.The universe is fantastic, share the love.

— Simon Watt (@SimonDWatt) March 11, 2013

@metoffice Wind – global convection currents of air that make for good waves and good surf ?

— Simon Watt (@SimonDWatt) March 11, 2013

Going to the Big Bang Fair? Come and see us in the Met Office science zone (stand 31) to have a go at presenting your own weather forecast, chat to Met Office staff or have a hands-on science experience.

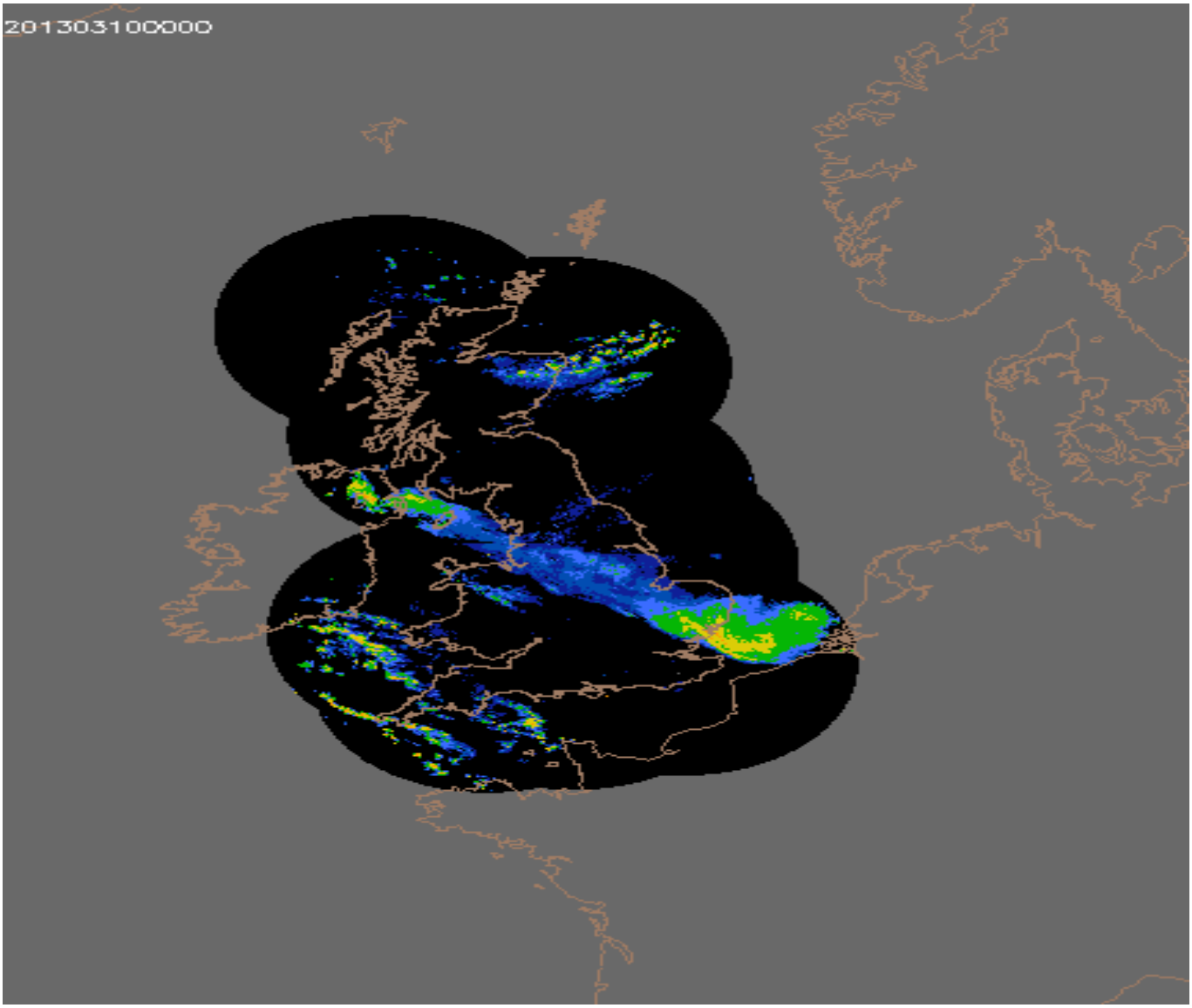
**Date Created**
March 2013

# This week’s snowfall captured by rainfall radar

## Description

The rainfall radar network is a great way of looking back at how weather systems affect the UK.

Here we see rainfall radar imagery from 00:00 GMT on Sunday 10 March to 09:00 GMT on Tuesday 12 March. It shows snow showers affecting much of the UK while an area of heavier snowfall affects northern France, the Channel Islands and the far south-east of England.




What’s particularly interesting is that it shows really well how the showers and the heavier snowfall across the south were moving in totally different directions. The snow showers can be seen moving in from the North Sea on north-easterly winds. Meanwhile, the heavier and more persistent snowfall was moving in from the south-west as an area of low pressure tracked across France. You can see how

these two systems collided over Sussex and Kent, resulting in the heavy snowfall here.

At the very end of the sequence the wind changes direction again over the north of the UK, with the snow showers being blown across Scotland from the north.

You can see current observations from our rainfall radar on our website.

**Date Created**
March 2013

# Guest blog: Met Office launches volcanic ash forecasting game for National Science and Engineering Week

## Description

**Today's guest post is from our education channel for children, here's Billy Blizzard to tell us about EVACuate…**

Billy Blizzard

National Science & Engineering Week (NSEW) 2013 starts today and is now a mainstay in the UK events calendar. Initiatives like this have led the cultural shift  towards science being 'cool', and people are now 'getting their geek on' in droves.

NSEW has been going for nearly 20 years now and it's an excellent excuse for us all to take part in something scientific that relates to our daily lives. At the Met Office, science is our daily lives, so we're very supportive of this initiative and will be celebrating the week with the rest of the UK.

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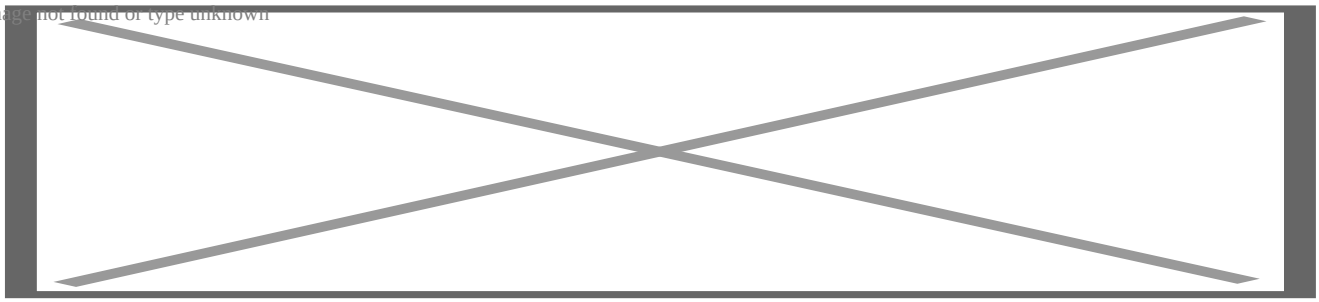


In fact, to show the strength of our support we've created a new game 'eVACuate!' for people to play at home or in classrooms across the country. Based on our volcanic ash forecasting responsibilities, teams are tasked with advising the Centre for Emergency Situations with the evacuation efforts on the fictional Green Island, where FitzRoy's Peak has started to erupt!

As the UK's national weather and climate service, we take every opportunity to help people understand what we do and how we do it. Having a game based on mapping volcanic ashclouds highlights the vital role we play in providing weather information – and more – for the country.

To get involved visit NSEW or play the game.

**Related articles**

- Big Bang Fair twitter interviews with Dallas Campbell and Simon Watt (metofficenews.wordpress.com)
- Volcanic Ash Advisory Centres (VAAC) (metoffice.gov.uk)

**Date Created**
March 2013

# March – a month of weather contrasts

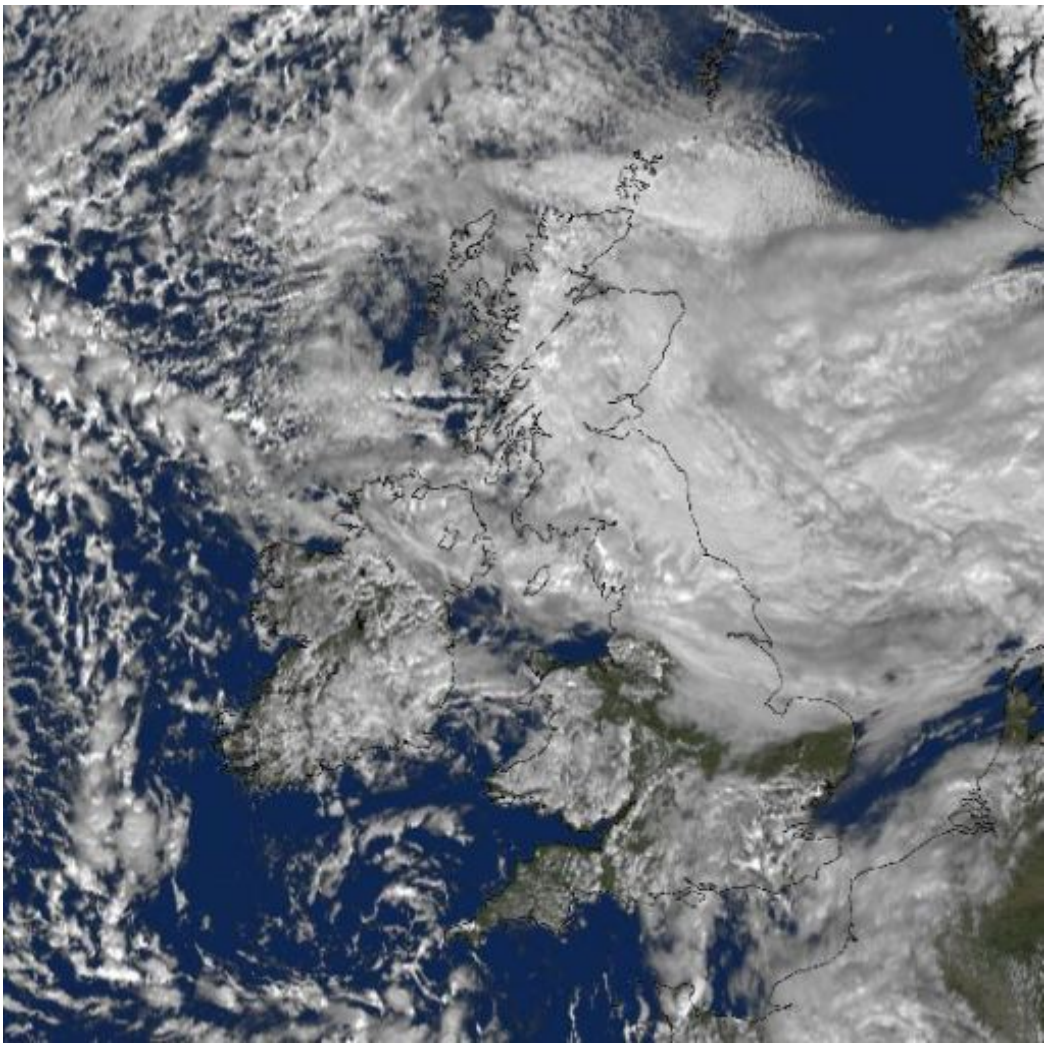
## Description

Winter seems to have hung on for quite some time this year with low temperatures, frost, ice and snow affecting many areas into late March. This isn't altogether unusual as we are more likely to see snow at Easter than at Christmas. However, March 2012 was very different with plenty of sunshine and temperatures into the low 20s Celsius. How come?

Well, this time last year the UK was under the influence of high pressure. This gave us clear skies, plenty of sunshine and with a light southerly breeze, temperatures that were well above average. In fact, Scotland set an all time record maximum temperature with 22.8 °C at Fyvie Castle in Aberdeenshire.

Visible satellite image from March 2012

This year, with a strong easterly wind bringing cold air from Scandinavia and Eastern Europe, we have quite the opposite with eastern parts of the UK in particular seeing snow, ice and temperatures around 20 degrees Celsius lower.


Visibile satellite image from March 2013

The direction of the wind therefore plays a major part in what type of weather you and I will see, especially as we have the Atlantic Ocean to our west and continental Europe to our south and east. Different wind directions bring air with different temperature and moisture contents. Meteorologically, they are termed air masses and in March 2012 we saw a Tropical Continental air mass bringing dry and warm air from the Mediterranean. This year we have been affected by a Polar Continental air mass, bringing cold air from the east. The following video explains exactly what we mean by air masses.

With different air masses constantly affecting the UK, the weather is a particularly challenging thing to forecast, especially so in March. This is because in early spring the sun is starting to rise higher in the sky and the amount of daylight hours start to increase. This means we get more heat building up in the lower part of our atmosphere. The result is slightly more energy, which in turn can lead to heavier showers. We can also see more unstable air and more active fronts as a result of greater heating. With more moisture available in the atmosphere, we also tend to see heavier or more prolonged rainfall and if this mixes with cold air, more snowfall. It makes forecasting more complicated because the extra heat and moisture adds another aspect to the weather, which tends amplify the effects of different air masses.

You can find out more about forecasting snow on our website or on the following video:

**Date Created**
March 2013

# February weather pictures and video summary

## Description

February was rather unsettled during the first half, but much more settled for the second half as high pressure brought mainly dry but often cloudy conditions with lower temperatures. This was the longest spell of dry weather of the whole winter.

In our video forecaster Charlie talks through the weather we saw and the highs and lows of the month, weather wise.

Thank you for sharing your weather photos with us on Twitter, here's a selection of our favourites.

> @metoffice Canary Wharf from Trinity Buoy Wharf. It's there, somewhere! #iscout @yourcanarywharf #weather twitter.com/ExplorerScoutE…
>
> — ELndnExplorerScouts (@ExplorerScoutEL) March 19, 2013

> @metoffice #ukweather twitter.com/h_sephton/stat… — Hayley Sephton (@h_sephton) March 19, 2013

> @metoffice @theflyinggopro a nice sunset..flickr.com/photos/tupperw… — The Flying GoPro (@theflyinggopro) March 19, 2013

> @metoffice hard frost on the black mountains last month! #Blackmountains twitter.com/pease971/statu…
>
> — anthony pease (@pease971) March 19, 2013

> @metoffice Misty River Exe twitter.com/Emma72/status/…
>
> — Emma Le P (@Emma72) March 19, 2013

> twitpic.com/c6xmo2 – @metoffice Feb blue sky & snow Helvellyn range Lake District Cumbria. Alpine conditions — Alan Hinkes (@alanhinkes) March 19, 2013

> @metoffice Flint, north Wales a few days before the snow!! The shadows are of me and Merlin the dog ? twitter.com/AMcKT/status/3… — Angela Thomas (@AMcKT) March 19, 2013

> @metoffice flickr.com/photos/susan_g…
>
> — Me: Roger B (@rojertb) March 19, 2013

You can read a full summary of the weather in February in the UK on our website.

**Related articles**

- January weather – your pictures (metofficenews.wordpress.com)
- March – a month of weather contrasts (metofficenews.wordpress.com)

**Date Created**
March 2013

# Five things you might not know about thunderstorms

## Description

1. Lighting can strike twice. The empire state building in New York has been struck by lightning as many as 48 times in one day.
2. The average flash of lightning would light a 100 watt light bulb for three months.
3. Lightning can strike in volcanic ash clouds. Not much is known about volcanic lightning, but we're using it to help track ash clouds.

Volcanic lightning

4. Thunderstorms can trigger asthma. The Met Office has worked with the NHS and Asthma UK to try and understand why.
5. The most thundery part of the earth is the island of Java where the annual frequency of thunderstorms is about 220 days per year.

**Date Created**
March 2013

# Latest snow depths and wind speeds – 24 March

## Description

As forecast, we have seen some very wintry weather over the last few days. Here are some figures showing where the most snow has fallen.

Wittering in Cambridgeshire saw the deepest snow, with 24 cm recorded at 9 am this morning.

Many areas also saw strong winds, with a gust of 61 mph recorded at Shap, Cumbria and 48 mph recorded at Machrihanish, Argyll . These winds have caused even deeper drifts of snow in some areas.

# Snow depths at 9 am 24 March

| TIME | SITE NAME | AREA | ELEVATION (m) | SN (c |
|---|---|---|---|---|
| 09:00 | WITTERING | CAMBRIDGESHIRE | 73 | 24 |
| 09:00 | WATTISHAM | SUFFOLK | 89 | 20 |
| 09:00 | NOTTINGHAM, WATNALL | NOTTINGHAMSHIRE | 117 | 19 |
| 09:00 | SHAWBURY | SHROPSHIRE | 72 | 14 |
| 09:00 | ANDREWSFIELD | ESSEX | 87 | 12 |
| 09:00 | CRANWELL | LINCOLNSHIRE | 63 | 10 |
| 09:00 | LEEK, THORNCLIFFE | STAFFORDSHIRE | 298 | 7 |
| 09:00 | ABOYNE | ABERDEENSHIRE | 140 | 7 |
| 09:00 | HIGH WYCOMBE | BUCKINGHAMSHIRE | 204 | 7 |
| 09:00 | SENNYBRIDGE | POWYS | 307 | 7 |
| 09:00 | SHAP | CUMBRIA | 252 | 7 |
| 09:00 | COLESHILL | WARWICKSHIRE | 96 | 6 |
| 09:00 | HAWARDEN AIRPORT | CLYWD | 11 | 6 |

**Date Created**
March 2013

# Is there a UK ‘heatwave’ on the way?

## Description

There have been some headlines today suggesting the Met Office has forecast a ‘heatwave’ by the end of spring.

The articles reference a line from our March to May three-month outlook for contingency planners which refers to how our Spring weather can change depending on where large areas of ‘blocking’ high pressure systems lie in relation to the UK – something we recently wrote about when contrasting the weather this March to that of last year.

This is not, however, a forecast of what the weather is expected to be like at the end of the spring or whether a ‘heatwave’ is likely or not, but is an indication of how average temperatures may differ from normal throughout the whole three month period of March, April and May.

Clearly this is the time of year when temperatures rise in response to the sun getting higher in the northern hemisphere sky, the days get longer and continental Europe warms up. So we will undoubtedly get some warmer spells of weather as the months go on and these will be picked up in our accurate five-day forecasts, as well as our forecasts out to 30 days ahead, which gives a more general view of the weather ahead over a longer-timescale. It is our accurate five-day forecasts and weather warnings provide the best possible advice and detail on what weather to expect in the UK.

This week is set to remain very cold with further wintry flurries in places.

**Date Created**
March 2013

# Cold Weather Alert Service extended to help support

## Description

With cold weather forecast across the UK as we head through the Easter weekend and into the start of April, the Cold Weather Alert Service, which usually finishes at the end of March, has been

The Cold Weather Plan, which has run successfully since 2011, has been developed by the Department of Health, Met Office and Health Protection Agency, and supported by AgeUK.

The purpose of the Cold Weather Plan is to help raise awareness of the dangers of cold weather on health with both the general public and professionals alike. It spells out what preparations both individuals and organisations could make to reduce health risks and includes specific measures to protect at-risk groups.

The Cold Weather Plan has been supported again this winter by the Met Office Cold Weather Alert Service, which notifies frontline staff across the health, social care, community and voluntary sectors, and AgeUK, as well as the general public across England, when cold weather could impact on our health.

The continued period of cold weather has brought substantial media focus. By extending the service we are ensuring that accurate and reliable forecasts and alerts are sent to frontline staff and carers in our health services. This will help them to look after those who are more vulnerable and ensure that they stay well and healthy during this prolonged spell of cold weather.

You can keep up to date with the latest forecasts from the Met Office on our website.

**Date Created**
March 2013

# Met Office figures show we are on course for coldest March in over 50 years

## Description

This March is set to be the coldest since 1962 in the UK in the national record dating back to 1910, according to provisional Met Office statistics.

From 1 to 26 March the UK mean temperature was 2.5 °C, which is three degrees below the long term average. This also makes it joint 4th coldest on record in the UK.

The table below gives details of statistics up to the 26 March for broken down by the counties used to compile climate statistics.

| | mean temperature | | precipitation | |
|---|---|---|---|---|
| | **Actual (deg C)** | **Difference from 1981-2010 average (deg C)** | **Actual (mm)** | **Percentage of 1981-2010 average (%)** |
| Regions | | | | |
| UK | 2.5 | -3.0 | 62.2 | 65 |
| England | 2.9 | -3.3 | 63.4 | 99 |
| Wales | 2.8 | -3.0 | 86.2 | 74 |
| Scotland | 1.6 | -2.5 | 50.3 | 36 |
| N Ireland | 3.0 | -2.9 | 78.9 | 83 |
| England & Wales | 2.9 | -3.3 | 66.6 | 94 |
| England N | 2.0 | -3.5 | 54.0 | 72 |
| England S | 3.4 | -3.2 | 68.4 | 118 |
| Historic Counties | | | | |
| Aberdeenshire | 0.6 | -3.1 | 67.9 | 86 |
| Anglesey | 3.9 | -2.9 | 79.8 | 100 |
| Antrim | 2.9 | -2.8 | 68.9 | 75 |
| Argyllshire | 2.5 | -2.1 | 47.2 | 22 |
| Armagh | 3.1 | -3.1 | 96.8 | 125 |

| | | | | |
|---|---|---|---|---|
| Ayrshire | 2.0 | -2.9 | 53.8 | 41 |
| Banffshire | 0.8 | -3.1 | 56.4 | 76 |
| Bedfordshire | 3.0 | -3.5 | 50.1 | 119 |
| Berkshire | 3.4 | -3.2 | 78.5 | 157 |
| Berwickshire | 1.6 | -3.2 | 65.0 | 108 |
| Brecknockshire | 1.9 | -3.1 | 100.5 | 74 |
| Buckinghamshire | 3.1 | -3.4 | 66.6 | 137 |
| Buteshire | 2.7 | -2.3 | 58.0 | 36 |
| Caithness | 2.3 | -1.9 | 45.5 | 52 |
| Cambridgeshire | 3.2 | -3.5 | 40.0 | 102 |
| Cardiganshire | 2.8 | -2.8 | 62.5 | 54 |
| Carmarthenshire | 3.4 | -2.7 | 87.0 | 69 |
| Carnarvonshire | 2.8 | -3.0 | 96.1 | 64 |
| Cheshire | 2.9 | -3.5 | 42.1 | 72 |
| Clackmannanshire | 1.7 | -2.7 | 65.3 | 57 |
| Cornwall | 5.1 | -2.3 | 102.0 | 109 |
| Cumberland | 1.6 | -3.3 | 42.1 | 37 |
| Denbighshire | 2.1 | -3.4 | 66.2 | 75 |
| Derbyshire | 1.9 | -3.7 | 58.8 | 81 |
| Devon | 4.0 | -2.7 | 112.9 | 118 |
| Dorset | 4.0 | -2.7 | 96.8 | 132 |
| Down | 3.2 | -3.0 | 158.4 | 193 |
| Dumfriesshire | 1.3 | -3.1 | 65.6 | 53 |
| Dunbartonshire | 2.1 | -2.7 | 49.4 | 25 |
| Durham | 1.6 | -3.4 | 61.9 | 99 |
| East Lothianshire | 1.9 | -3.2 | 55.4 | 100 |
| Essex | 3.5 | -3.3 | 44.2 | 110 |
| Fermanagh | 3.0 | -3.0 | 45.6 | 42 |
| Fifeshire | 2.3 | -3.0 | 58.8 | 89 |
| Flintshire | 2.9 | -3.5 | 60.9 | 105 |
| Forfarshire | 0.9 | -3.0 | 73.1 | 89 |
| Glamorganshire | 3.6 | -2.8 | 123.1 | 98 |
| Gloucestershire | 3.2 | -3.3 | 77.1 | 129 |

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|---|---|---|---|---|
| Hampshire | 3.9 | -2.9 | 85.4 | 133 |
| Herefordshire | 2.9 | -3.5 | 80.3 | 134 |
| Hertfordshire | 3.2 | -3.4 | 50.3 | 109 |
| Huntingdonshire | 3.1 | -3.6 | 56.4 | 143 |
| Inverness | 1.3 | -2.1 | 36.9 | 19 |
| Kent | 3.8 | -3.1 | 58.2 | 121 |
| Kincardineshire | 1.5 | -3.1 | 56.5 | 82 |
| Kinross | 1.5 | -3.0 | 65.6 | 65 |
| Kirkcudbrightshire | 1.7 | -3.0 | 79.2 | 54 |
| Lanarkshire | 1.2 | -3.0 | 51.8 | 47 |
| Lancashire | 2.6 | -3.3 | 41.1 | 45 |
| Leicestershire | 2.4 | -3.8 | 52.4 | 114 |
| Lincolnshire | 2.7 | -3.6 | 49.0 | 113 |
| Londonderry | 3.0 | -2.8 | 59.3 | 60 |
| Merionethshire | 1.8 | -3.1 | 98.6 | 62 |
| Mid Lothianshire | 1.7 | -3.1 | 59.4 | 83 |
| Middlesex | 4.2 | -3.3 | 57.7 | 128 |
| Monmouthshire | 3.1 | -3.2 | 94.8 | 100 |
| Montgomeryshire | 2.0 | -3.4 | 64.5 | 56 |
| Moray | 1.7 | -2.8 | 39.5 | 60 |
| Nairnshire | 1.5 | -2.9 | 32.0 | 47 |
| Norfolk | 3.0 | -3.4 | 60.5 | 128 |
| Northamptonshire | 2.6 | -3.6 | 61.0 | 133 |
| Northumberland | 1.5 | -3.3 | 63.0 | 92 |
| Nottinghamshire | 2.6 | -3.8 | 49.0 | 113 |
| Oxfordshire | 3.0 | -3.3 | 74.3 | 149 |
| Peeblesshire | 0.4 | -3.4 | 69.6 | 68 |
| Pembrokeshire | 4.0 | -2.6 | 76.9 | 77 |
| Perthshire | 0.6 | -2.6 | 58.8 | 39 |
| Radnorshire | 1.7 | -3.2 | 87.8 | 91 |
| Renfrewshire | 2.5 | -2.8 | 42.8 | 29 |
| Ross and Cromarty | 2.1 | -2.0 | 35.1 | 20 |
| Roxburghshire | 1.0 | -3.4 | 62.8 | 73 |
| Rutland | 2.4 | -3.7 | 58.0 | 123 |

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|---|---|---|---|---|
| Selkirkshire | 0.5 | -3.1 | 76.5 | 68 |
| Shropshire | 2.6 | -3.5 | 61.6 | 108 |
| Somerset | 3.8 | -3.0 | 65.3 | 91 |
| Staffordshire | 2.3 | -3.7 | 51.0 | 87 |
| Stirlingshire | 1.9 | -2.9 | 53.2 | 36 |
| Suffolk | 3.2 | -3.3 | 46.4 | 104 |
| Surrey | 3.7 | -3.1 | 72.1 | 135 |
| Sussex | 4.0 | -2.8 | 64.6 | 103 |
| Sutherland | 1.5 | -2.4 | 38.8 | 27 |
| Tyrone | 2.8 | -2.8 | 60.1 | 57 |
| Warwickshire | 2.8 | -3.6 | 52.2 | 110 |
| West Lothianshire | 1.9 | -3.1 | 49.3 | 62 |
| West Suffolk | 3.3 | -3.5 | 31.8 | 80 |
| Westmorland | 1.2 | -3.1 | 56.1 | 40 |
| Wigtownshire | 2.7 | -2.8 | 55.5 | 51 |
| Wiltshire | 3.3 | -3.0 | 76.1 | 118 |
| Worcestershire | 3.1 | -3.5 | 63.9 | 133 |
| Yorkshire | 1.9 | -3.6 | 59.0 | 84 |

Clearly March has been extremely cold and snowy and joins 2006, 2001, 1995, 1987, 1979, 1970 and 1962 as years when March saw some significant snowfall.

The cold weather is expected to continue through the Easter weekend and into April. You can stay up-to-date with forecasts and warnings online, through our mobile apps, facebook and twitter, and through TV and radio broadcasts.

The table below lists the coldest March average temperatures on record and details where March 2013 ranks in terms of cold months of March.

| **Area** | **Coldest March on Record (deg C and year)** | | **Rank of March 2013** |
|---|---|---|---|
| Aberdeenshire | -1.4 | 1947 | 5 |
| Anglesey | 3.6 | 1962 | 2 |
| Antrim | 2.2 | 1947 | 5 |
| Argyllshire | 1.5 | 1947 | 5 |
| Armagh | 2.9 | 1919/1947 | 4 |

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|---|---|---|---|
| Ayrshire | 1.0 | 1947 | 5 |
| Banffshire | -1.0 | 1947 | 5 |
| Bedfordshire | 2.3 | 1962 | 2 |
| Berkshire | 2.6 | 1962 | 2 |
| Berwickshire | 0.3 | 1947 | 5 |
| Brecknockshire | 1.1 | 1962 | 2 |
| Buckinghamshire | 2.3 | 1962 | 2 |
| Buteshire | 1.5 | 1947 | 5 |
| Caithness | 0.0 | 1947 | 5 |
| Cambridgeshire | 2.6 | 1962 | 2 |
| Cardiganshire | 2.0 | 1962 | 3 |
| Carmarthenshire | 2.5 | 1962 | 3 |
| Carnarvonshire | 2.3 | 1962 | 3 |
| Cheshire | 2.6 | 1962 | 2 |
| Clackmannanshire | 0.1 | 1947 | 4 |
| Cornwall | 3.9 | 1962 | 2 |
| Cumberland | 1.0 | 1947 | 4 |
| Denbighshire | 1.4 | 1962 | 2 |
| Derbyshire | 1.5 | 1962 | 2 |
| Devon | 3.1 | 1962 | 2 |
| Dorset | 3.1 | 1962 | 2 |
| Down | 3.0 | 1937/1947 | 4 |
| Dumfriesshire | 0.5 | 1947 | 5 |
| Dunbartonshire | 0.3 | 1947 | 5 |
| Durham | 0.9 | 1947 | 4 |
| East Lothianshire | 0.2 | 1947 | 5 |
| Essex | 2.8 | 1962 | 2 |
| Fermanagh | 2.8 | 1947 | 3 |
| Fifeshire | 0.7 | 1947 | 5 |
| Flintshire | 2.4 | 1962 | 2 |
| Forfarshire | -0.6 | 1947 | 4 |
| Glamorganshire | 2.9 | 1962 | 3 |
| Gloucestershire | 2.6 | 1962 | 2 |
| Hampshire | 3.0 | 1962 | 2 |
| Herefordshire | 2.4 | 1962 | 2 |
| Hertfordshire | 2.4 | 1962 | 2 |
| Huntingdonshire | 2.6 | 1962 | 2 |
| Inverness | 0.0 | 1947 | 5 |
| Kent | 2.9 | 1962 | 2 |
| Kincardineshire | 0.3 | 1947 | 2 |

| | | | |
|---|---|---|---|
| Kinross | -0.1 | 1947 | 5 |
| Kirkcudbrightshire | 0.9 | 1947 | 3 |
| Lanarkshire | 0.0 | 1947 | 5 |
| Lancashire | 2.3 | 1962 | 2 |
| Leicestershire | 2.0 | 1962 | 2 |
| Lincolnshire | 2.4 | 1962 | 2 |
| Londonderry | 2.2 | 1947 | 5 |
| Merionethshire | 1.2 | 1962 | 3 |
| Mid Lothianshire | 0.1 | 1947 | 5 |
| Middlesex | 3.4 | 1962 | 2 |
| Monmouthshire | 2.5 | 1962 | 2 |
| Montgomeryshire | 1.3 | 1962 | 3 |
| Moray | -0.2 | 1947 | 5 |
| Nairnshire | 0.0 | 1947 | 5 |
| Norfolk | 2.5 | 1962 | 2 |
| Northamptonshire | 2.1 | 1962 | 2 |
| Northumberland | 0.4 | 1947 | 4 |
| Nottinghamshire | 2.4 | 1962 | 2 |
| Oxfordshire | 2.4 | 1962 | 2 |
| Peeblesshire | -1.2 | 1947 | 5 |
| Pembrokeshire | 3.2 | 1962 | 3 |
| Perthshire | -1.2 | 1947 | 5 |
| Radnorshire | 1.1 | 1962 | 2 |
| Renfrewshire | 0.8 | 1947 | 5 |
| Ross and Cromarty | 0.8 | 1947 | 5 |
| Roxburghshire | -0.4 | 1947 | 5 |
| Rutland | 1.9 | 1962 | 2 |
| Selkirkshire | -0.8 | 1947 | 5 |
| Shropshire | 2.1 | 1962 | 2 |
| Somerset | 3.0 | 1962 | 2 |
| Staffordshire | 1.9 | 1962 | 2 |
| Stirlingshire | 0.1 | 1947 | 5 |
| Suffolk | 2.5 | 1962 | 2 |
| Surrey | 2.8 | 1962 | 2 |
| Sussex | 2.9 | 1962 | 2 |
| Sutherland | 0.1 | 1947 | 5 |
| Tyrone | 2.3 | 1947 | 5 |
| Warwickshire | 2.3 | 1962 | 2 |
| West Lothianshire | 0.3 | 1947 | 5 |
| West Suffolk | 2.5 | 1962 | 2 |

| | | | |
|---|---|---|---|
| Westmorland | 0.4 | 1947 | 3 |
| Wigtownshire | 1.7 | 1947 | 3 |
| Wiltshire | 2.5 | 1962 | 2 |
| Worcestershire | 2.7 | 1962 | 2 |
| Yorkshire | 1.4 | 1947 | 3 |

The full month figures for March 2013 will be available later next week and a summary of the month will be issued soon after.

**Date Created**
March 2013

# Met Office continues to drive forward research on long-range forecasting

## Description

The BBC Radio 4 ‘Today’ Programme have run a story this morning regarding the advice the Met Office gave to our government customers ahead of the exceptionally wet weather of April to June 2012.

This was an extreme period of weather that saw a marked change from dry conditions to very wet conditions in a very short period of time.

Following the exceptionally wet weather of late spring 2012 the Met Office provided a full report into the possible reasons for the switch from dry to wet conditions. Our report states that the advice provided in the long-range outlook for April to June 2012 issued in March 2012 ‘was not helpful’ to our government customers.

However, looking at the skill of these outlooks over many individual forecasts clearly shows that they provide useful advice to their specialist users on over 65% of occasions. In addition these outlooks are never used in isolation but form one part of a range of forecasts from the Met Office including regular monthly outlooks and highly accurate 1 to 5 day forecasts and warnings.

**Facing up to the challenge of long-range forecasting**

The science of long-range forecasting is at the cutting edge of meteorology and the Met Office is leading the way in this research area. We are continuing to work hard to develop the science of long-range forecasting. We are confident that long-range outlooks will improve progressively and that the successes we have achieved in other parts of the world already will, in the future be mirrored in the UK.

The Met Office constantly reviews the accuracy of our forecasts across all time scales and is recognised by the World Meteorological Organization as one of the top two national weather forecasting services in the world. We also routinely verify our short-range forecasts on our website.

**The ‘big switch’ of April 2012**

During March 2012 the La Nina event that had persisted from 2009 was finally waning in the Pacific (as predicted by the seasonal forecast system), although many parts of the global oceans and tropical weather patterns still retained characteristics associated with La Nina. In the northern hemisphere the jet stream was very disturbed, resulting in a wave pattern of high and low pressure regions. The UK was positioned under a strong high pressure region resulting in very dry and warm conditions. In April, the wave pattern underwent a significant shift to bring the UK under the influence of strong low pressure, with prevailing south-westerly flow and heavy rainfall.

As detailed on ‘Today’, one of the potential causes of this shift in the northern hemisphere circulation may have been associated with a shift in tropical weather patterns. In particular, this may have been caused by a strong Madden Julian Oscillation (MJO) which occurred in March. This is a large-scale tropical phenomenon which leads to disturbed weather patterns over a timescales of typically 30-60 days. This changes originating over the Indian Ocean may have influenced our northern hemisphere weather regimes. Understanding the initiation of an MJO event is, however, largely unpredictable, and

remains one of the great unsolved challenges of tropical meteorology.

Due to the fact that the initiation of an MJO is largely unpredictable – combined with knowledge that often subtle, and sometimes small, shifts in hemispheric circulation patterns can make all the difference between fine, dry weather and unsettled, wet weather over the UK – it is very unlikely that its impacts could have been anticipated in any forecasts for the coming months issued in early and mid-March.

**A complicated world**

Finally, although one reason for the switch in the fortunes of our weather in 2012 may have been the MJO, there are other parts of the climate system which we increasingly recognise as having an influence on our weather patterns. These include the North Atlantic Ocean temperatures, solar variability, the circulation of the upper atmosphere – the stratosphere – and of increasing interest, the changing state of the Arctic.

Better understanding and representing the drivers of predictability in the global climate system that influence our weather patterns is as ever a priority for Met Office research in order to deliver improved advice and services on all timescales.

- Continually improving our forecasts
- How accurate are our public forecasts?
- What you say about our forecasts and warnings
- Read case studies about our forecasts

**Date Created**
March 2013